

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 17-20 and 27-32 are presented for consideration. Claims 17, 20, 27 and 30 are independent. Claims 21-26 have been canceled without prejudice or disclaimer. Claims 27-32 have been added to recite additional features of the subject invention. Support for these claims can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants note with appreciation that claims 17-20 have been indicated as being allowable over the art of record. In addition to these claims being allowable, Applicants submit that claims 27-32 patentably define features of the scanning exposure apparatus, the device manufacturing method and the surface position detecting method of the subject invention. Therefore, Applicants request favorable reconsideration and withdrawal of the rejection set forth in the above-noted Office Action.

Claims 21-26 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,277,533 to Wakamoto et al. Applicants submit that this patent does not teach many features of the present invention as previously recited in claims 21-26. Therefore, this rejection is respectfully traversed. Nevertheless, Applicants submit that independent claims 27 and 30, for example, as presented, amplify the distinctions between the present invention and the cited art.

In one aspect of the present invention, independent claim 27 recites a scanning exposure apparatus that includes a stage unit on which an object to be exposed is placed and which moves the object, a position detecting unit which detects a position of a surface of the object, and a

control unit which obtains correction data for correcting detection results made by the position detecting unit with respect to a plurality of detection points, while a first scan of the object is made relative to the position detecting unit by the stage unit, and obtains corrected data by correcting detection results made by the position detecting unit with respect to a plurality of detection points using the correction data, while a second scan of the object is made relative to the position detecting unit by the stage unit. A detection cycle of the position detecting unit is initialized, during both of the first and second scans, based on a same target position of the object being scanned by the stage unit.

In another aspect of the present invention, independent claim 30 recites a surface position detecting method using a stage unit on which an object is placed and which moves the object, and a position detecting unit which detects a position of a surface of the object. The method includes steps of obtaining correction data for correcting detection results made by the position detecting unit with respect to a plurality of detection points, while a first scan of the object is made relative to the position detecting unit by the stage unit, and obtaining corrected data by correcting detection results made by the position detecting unit with respect to a plurality of detection points using the correction data, while a second scan of the object is made relative to the position detecting unit by the stage unit. A detection cycle of the position detecting unit is initialized, during both of the first and second scans, based on a same target position of the object being scanned by the stage unit.

Applicants submit that the cited art does not teach or suggest such features as recited in independent claims 27 and 30.

The Examiner relies on the Wakamoto et al. patent for teaching a scanning exposure system and its method that includes a stage unit on which an object is to be placed and which moves the object, a position detecting unit which detects a position of a surface of the object while the object is moved and a control unit. Applicants note that the Wakamoto et al. patent teaches, in exposure by a scanning exposure system, when the pattern of a reticle is exposed onto shot areas on a wafer while reading ahead to detect the focus positions at read-ahead regions before an exposure region with respect to the scanning direction, for each of shot areas on a peripheral region of a wafer, (1) the exposure is performed by scanning the wafer so that a slit-like exposure region moves relatively from the inside to the outside of the wafer, or (2) when the absolute value of the difference between the focus position at the read-ahead region and the focus position of an imaging plane in the exposure region exceed an allowable value, the height of the wafer is fixed at the height set until then, while ignoring the read-ahead data.

Applicants submit, however that the Wakamoto et al. patent does not teach or suggest the salient features of Applicants' present invention, as recited in independent claims 27 and 30, in which a detection cycle of a position detecting unit is initialized, during both of first and second scans, based on a same target position of an object being scanned by a stage unit.

Accordingly, Applicants submit that the Wakamoto et al. patent does not teach or suggest many features of the present invention, as recited in independent claims 27 and 30, and, therefore, should not be read to anticipate Applicants' invention recited in those claims.

For the reasons noted above, Applicants submit that the present invention, as recited in independent claims 27 and 30, also is patentably defined over the cited art.

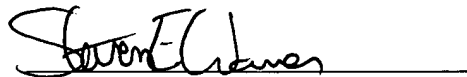
Dependent claims 28, 29, 31 and 32 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicants further submit that this Amendment After Final Rejection clearly places this application in condition for allowance. This Amendment was not earlier presented because Applicants believed that the prior Amendment placed the application in condition for allowance. Accordingly, entry of the instant Amendment, as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 CFR 1.116.

Favorable reconsideration, withdrawal of the rejection set forth in the above-noted Office Action and an early Notice of Allowance are also requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



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